

**DRAFT**  
**Appendix D:**  
**Highlands Stormwater Control Ordinance Amendments**

**Abstract**

This document provides suggested language for Highlands-specific amendments to existing municipal Stormwater Control Ordinances.

This document is included as Appendix D of the overall Highlands Region Stormwater Management Program Guidance document. For complete documentation, contact your Highlands Council Liaison ([www.state.nj.us/njhighlands/planconformance/liaisons/](http://www.state.nj.us/njhighlands/planconformance/liaisons/)).

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## **Highlands Council Municipal Plan Conformance Highlands Stormwater Control Ordinance Amendments**

All New Jersey municipalities were required to prepare Stormwater Management Plans and adopt a Stormwater Control Ordinance in order to comply with the New Jersey Stormwater Management Rules at N.J.A.C. 7:8. This document provides Highlands-specific amendments required in order to comply with the Highlands Regional Master Plan (RMP) and reflect RMP resource protection standards. These updates/revisions apply to all Highlands Preservation Area lands, as well as those lands located in the Planning Area of conforming towns. It is important to note that if a project is deemed exempt from the Highlands Act, the enhanced standards identified in this ordinance shall not apply.

The following amendments are meant to be inserted into the municipal Stormwater Management Ordinance. Section numbering in this document refers to the numbering as found in the NJDEP Model Stormwater Ordinance for Municipalities, Appendix D of the NJ Stormwater Best Management Practices Manual, April 2004 (**Revised March 2020**). Sections II (Definitions) and IV.P. (Stormwater Management Requirements for Major Development – Groundwater Recharge Standards) from the NJDEP Model have been excerpted and changes are shown in tracking mode for ease of use.

Part I is for a Highlands municipality (all lands conforming) to apply the standards on a municipal-wide basis. Part II is for Highlands municipalities that are only conforming for the Preservation Area. **Either Part I or Part II should be used, not both.** Similarly, either Prime Groundwater Recharge Area or Municipally Important Groundwater Recharge Area should be used, not both. For further distinction on these areas, please contact the municipal liaison. It is also important to note that the definition of “Impervious Surface” with respect to conforming Highlands lands is different than the definition found in the NJDEP model ordinance.

Standards in this ordinance may be amended upon municipal adoption of a Water Use and Conservation Management Plan.

## **PART I. STORMWATER ORDINANCE AMENDMENTS (Entire Municipality Conforming):**

### **Section II. Definitions:**

For the purpose of this ordinance, the following terms, phrases, words and their derivations shall have the meanings stated herein unless their use in the text of this Chapter clearly demonstrates a different meaning. When not inconsistent with the context, words used in the present tense include the future, words used in the plural number include the singular number, and words used in the singular number include the plural number. The word "shall" is always mandatory and not merely directory. The definitions below are the same as or based on the corresponding definitions in the Stormwater Management Rules at N.J.A.C. 7:8-1.2.

“CAFRA Centers, Cores or Nodes” means those areas with boundaries incorporated by reference or revised by the Department in accordance with N.J.A.C. 7:7-13.16.

“CAFRA Planning Map” means the map used by the Department to identify the location of Coastal Planning Areas, CAFRA centers, CAFRA cores, and CAFRA nodes. The CAFRA Planning Map is available on the Department’s Geographic Information System (GIS).

“Carbonate Rock Area” means an area where rock consisting chiefly of calcium and magnesium carbonates, such as limestone and dolomite, has been identified.

“Community basin” means an infiltration system, sand filter designed to infiltrate, standard constructed wetland, or wet pond, established in accordance with N.J.A.C. 7:8-4.2(c)14, that is designed and constructed in accordance with the New Jersey Stormwater Best Management Practices Manual, or an alternate design, approved in accordance with N.J.A.C. 7:8-5.2(g), for an infiltration system, sand filter designed to infiltrate, standard constructed wetland, or wet pond and that complies with the requirements of this chapter.

“Compaction” means the increase in soil bulk density.

“Contributory drainage area” means the area from which stormwater runoff drains to a stormwater management measure, not including the area of the stormwater management measure itself.

“Core” means a pedestrian-oriented area of commercial and civic uses serving the surrounding municipality, generally including housing and access to public transportation.

“County review agency” means an agency designated by the County Board of Chosen Freeholders to review municipal stormwater management plans and implementing ordinance(s). The county review agency may either be:

1. A county planning agency or
2. A county water resource association created under N.J.S.A 58:16A-55.5, if the ordinance or resolution delegates authority to approve, conditionally approve, or disapprove municipal stormwater management plans and implementing ordinances.

“Current Deficit Area” means any United States Geological Survey 14-digit Hydrologic Unit Code subwatershed area that is identified in the Highlands Regional Master Plan as having negative Net Water Availability, meaning that existing consumptive and depletive water uses exceed the capacity of the ground water supply to sustain.

“Department” means the Department of Environmental Protection.

“Designated Center” means a State Development and Redevelopment Plan Center as designated by the State Planning Commission such as urban, regional, town, village, or hamlet.

“Design engineer” means a person professionally qualified and duly licensed in New Jersey to perform engineering services that may include, but not necessarily be limited to, development of project requirements, creation and development of project design and preparation of drawings and specifications.

“Development” means the division of a parcel of land into two or more parcels, the construction, reconstruction, conversion, structural alteration, relocation or enlarge-enlargement of any building or structure, any mining excavation or landfill, and any use or change in the use of any building or other structure, or land or extension of use of land, for which permission is required under the Municipal Land Use Law, N.J.S.A. 40:55D-1 *et seq.*

In the case of development of agricultural land, development means: any activity that requires a State permit, any activity reviewed by the County Agricultural Board (CAB) and the State Agricultural Development Committee (SADC), and municipal review of any activity not exempted by the Right to Farm Act, N.J.S.A 4:1C-1 *et seq.*

“Disturbance” means the placement or reconstruction of impervious surface or motor vehicle surface, or exposure and/or movement of soil or bedrock or clearing, cutting, or removing of vegetation. Milling and repaving is not considered disturbance for the purposes of this definition.

“Drainage area” means a geographic area within which stormwater, sediments, or dissolved materials drain to a particular receiving waterbody or to a particular point along a receiving waterbody.

“Environmentally constrained area” means the following areas where the physical alteration of the land is in some way restricted, either through regulation, easement, deed restriction or ownership such as: wetlands, floodplains, threatened and endangered species sites or designated habitats, and parks and preserves. Habitats of

endangered or threatened species are identified using the Department's Landscape Project as approved by the Department's Endangered and Nongame Species Program.

“Environmentally critical area” means an area or feature which is of significant environmental value, including but not limited to: stream corridors, natural heritage priority sites, habitats of endangered or threatened species, large areas of contiguous open space or upland forest, steep slopes, and well head protection and groundwater recharge areas. Habitats of endangered or threatened species are identified using the Department’s Landscape Project as approved by the Department’s Endangered and Nongame Species Program.

“Empowerment Neighborhoods” means neighborhoods designated by the Urban Coordinating Council “in consultation and conjunction with” the New Jersey Redevelopment Authority pursuant to N.J.S.A 55:19-69.

“Erosion” means the detachment and movement of soil or rock fragments by water, wind, ice, or gravity.

“Green infrastructure” means a stormwater management measure that manages stormwater close to its source by:

1. Treating stormwater runoff through infiltration into subsoil;
2. Treating stormwater runoff through filtration by vegetation or soil; or
3. Storing stormwater runoff for reuse.

“Highlands Open Waters” means all springs, wetlands, intermittent and ephemeral streams, perennial streams and bodies of surface water, whether natural or artificial, located wholly or partially within the boundaries of the Highlands Region, but shall not mean swimming pools.

"HUC 14" or "hydrologic unit code 14" means an area within which water drains to a particular receiving surface water body, also known as a subwatershed, which is identified by a 14-digit hydrologic unit boundary designation, delineated within New Jersey by the United States Geological Survey.

“Impervious surface” means any structure, surface, or improvement that reduces or prevents absorption of stormwater into land, and includes porous paving, paver blocks, gravel, crushed stone, decks, patios, elevated structures, and other similar structures, surfaces, or improvements. To be considered an impervious surface, the structure, surface or improvement must have the effect of reducing or preventing stormwater absorption. a surface that has been covered with a layer of material so that it is highly resistant to infiltration by water.

“Infiltration” is the process by which water seeps into the soil from precipitation.

“Karst” means a distinctive topography that indicates solution of underlying carbonate rocks (such as limestone and dolomite) by surface water or groundwater over time, often producing surface depressions, sinkholes, sinking streams, enlarged bedrock fractures, caves, and underground streams.

“Lead planning agency” means one or more public entities having stormwater management planning authority designated by the regional stormwater management planning committee pursuant to N.J.A.C. 7:8-3.2, that serves as the primary representative of the committee.

“Major development” means an individual “development,” as well as multiple developments that individually or collectively result in:

1. The disturbance of one or more acres of land since February 2, 2004;
2. The creation of one-quarter acre or more of “regulated impervious surface” since February 2, 2004;
3. The creation of one-quarter acre or more of “regulated motor vehicle surface” since March 2, 2021 *{or the effective date of this ordinance, whichever is earlier}*; or
4. A combination of 2 and 3 above that totals an area of one-quarter acre or more. The same surface shall not be counted twice when determining if the combination area equals one-quarter acre or more.

Major development includes all developments that are part of a common plan of development or sale (for example, phased residential development) that collectively or individually meet any one or more of paragraphs 1, 2, 3, or 4 above. Projects undertaken by any government agency that otherwise meet the definition of “major development” but which do not require approval under the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq., are also considered “major development.”

*NOTE: The definition of major development above aligns with the definition at N.J.A.C. 7:8-1.2 and is recommended for consistency. Alternatively, a municipality may adopt the following definition, which is the minimum standard required. Municipalities that have already adopted the definition at N.J.A.C. 7:8-1.2 or another definition that goes beyond the minimum requirement should not reduce the stringency of their definition by adopting the minimum standard.*

*“Major development” means an individual “development,” as well as multiple developments that individually or collectively result in the disturbance of one or more acres of land since February 2, 2004.*

*Major development includes all developments that are part of a common plan of development or sale (for example, phased residential development) that collectively or individually result in the disturbance of one or more acres of land since February 2, 2004. Projects undertaken by any government agency that otherwise meet the definition of “major development” but*

*which do not require approval under the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq., are also considered "major development."*

*Additionally, individual municipalities may define major development with a smaller area of disturbance, a smaller area of regulated impervious or motor vehicle surface, or both.*

"Mitigation" means an action by an applicant providing compensation or offset actions for onsite stormwater management requirements where the applicant has demonstrated the inability or impracticality of strict compliance with the stormwater management requirements set forth in NJAC 7:8, in an adopted regional stormwater management plan, or in this local ordinance, and has received a waiver from strict compliance from the municipality. Mitigation shall include the implementation of the approved mitigation plan within the same drainage area where the subject project is proposed, or a contribution of funding toward a municipal stormwater control project, or provision for equivalent treatment at an alternate location, or any other equivalent water quality benefit as approved by the municipality.

"Motor vehicle" means land vehicles propelled other than by muscular power, such as automobiles, motorcycles, autocycles, and low speed vehicles. For the purposes of this definition, motor vehicle does not include farm equipment, snowmobiles, all-terrain vehicles, motorized wheelchairs, go-carts, gas buggies, golf carts, ski-slope grooming machines, or vehicles that run only on rails or tracks.

"Motor vehicle surface" means any pervious or impervious surface that is intended to be used by "motor vehicles" and/or aircraft, and is directly exposed to precipitation including, but not limited to, driveways, parking areas, parking garages, roads, racetracks, and runways.

"Municipality" means any city, borough, town, township, or village.

"Municipally Important Ground Water Recharge Area" means preserved or constrained lands that cannot be developed or built upon under current regulations. These areas have recharge rates above the median recharge rate for the subwatershed in which they are located; meaning they provide 40% or greater total recharge volume for the subwatershed. Constrained lands are comprised of undeveloped lands within the Highlands Open Water buffer as well as moderately and severely constrained steep slopes. Preserved lands are those that are permanently preserved by local, county, state, federal or non-profit entities. **OR Prime Ground Water Recharge Area**

"New Jersey Stormwater Best Management Practices (BMP) Manual" or "BMP Manual" means the manual maintained by the Department providing, in part, design specifications, removal rates, calculation methods, and soil testing procedures approved by the Department as being capable of contributing to the achievement of the stormwater management standards specified in this chapter. The BMP Manual is periodically amended by the Department as necessary to provide design specifications on additional best management practices and new information on already included



practices reflecting the best available current information regarding the particular practice and the Department's determination as to the ability of that best management practice to contribute to compliance with the standards contained in this chapter. Alternative stormwater management measures, removal rates, or calculation methods may be utilized, subject to any limitations specified in this chapter, provided the design engineer demonstrates to the municipality, in accordance with Section IV.F. of this ordinance and N.J.A.C. 7:8-5.2(g), that the proposed measure and its design will contribute to achievement of the design and performance standards established by this chapter.

"Node" means an area designated by the State Planning Commission concentrating facilities and activities which are not organized in a compact form.

"Non-Exempt Project" means any project not eligible for an exemption from the Highlands Water Protection and Planning Act Rules, pursuant to N.J.A.C. 7:38-2.3.

"Nutrient" means a chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the development of organisms.

"Person" means any individual, corporation, company, partnership, firm, association, political subdivision of this State and any state, interstate or Federal agency.

"Pollutant" means any dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, refuse, oil, grease, sewage sludge, munitions, chemical wastes, biological materials, medical wastes, radioactive substance (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. §§ 2011 *et seq.*)), thermal waste, wrecked or discarded equipment, rock, sand, cellar dirt, industrial, municipal, agricultural, and construction waste or runoff, or other residue discharged directly or indirectly to the land, ground waters or surface waters of the State, or to a domestic treatment works. "Pollutant" includes both hazardous and nonhazardous pollutants.

"Prime Ground Water Recharge Area" means lands with the best ground water recharge rates within a HUC14 subwatershed, as indicated by GSR-32 analysis, that provide the top forty percent (40%) of the total recharge volume for the subwatershed. (OR Municipally Important Ground Water Recharge Area)

"Recharge" means the amount of water from precipitation that infiltrates into the ground and is not evapotranspired.

"Regional Master Plan" means the Highlands regional master plan or any revision thereof adopted by the Highlands Water Protection and Planning Council pursuant to N.J.S.A. C.13:20-8.

“Regulated impervious surface” means any of the following, alone or in combination:

1. A net increase of impervious surface;
2. The total area of impervious surface collected by a new stormwater conveyance system (for the purpose of this definition, a “new stormwater conveyance system” is a stormwater conveyance system that is constructed where one did not exist immediately prior to its construction or an existing system for which a new discharge location is created);
3. The total area of impervious surface proposed to be newly collected by an existing stormwater conveyance system; and/or
4. The total area of impervious surface collected by an existing stormwater conveyance system where the capacity of that conveyance system is increased.

“Regulated motor vehicle surface” means any of the following, alone or in combination:

1. The total area of motor vehicle surface that is currently receiving water;
2. A net increase in motor vehicle surface; and/or  
quality treatment either by vegetation or soil, by an existing stormwater management measure, or by treatment at a wastewater treatment plant, where the water quality treatment will be modified or removed.

“Sediment” means solid material, mineral or organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water or gravity as a product of erosion.

“Site” means the lot or lots upon which a major development is to occur or has occurred.

“Soil” means all unconsolidated mineral and organic material of any origin.

“State Development and Redevelopment Plan Metropolitan Planning Area (PA1)” means an area delineated on the State Plan Policy Map and adopted by the State Planning Commission that is intended to be the focus for much of the State’s future redevelopment and revitalization efforts.

“State Plan Policy Map” is defined as the geographic application of the State Development and Redevelopment Plan’s goals and statewide policies, and the official map of these goals and policies.

“Stormwater” means water resulting from precipitation (including rain and snow) that runs off the land’s surface, is transmitted to the subsurface, or is captured by separate storm sewers or other sewage or drainage facilities, or conveyed by snow removal equipment.

“Stormwater management BMP” means an excavation or embankment and related areas designed to retain stormwater runoff. A stormwater management BMP may either be normally dry (that is, a detention basin or infiltration system), retain water in

a permanent pool (a retention basin), or be planted mainly with wetland vegetation (most constructed stormwater wetlands).

“Stormwater management measure” means any practice, technology, process, program, or other method intended to control or reduce stormwater runoff and associated pollutants, or to induce or control the infiltration or groundwater recharge of stormwater or to eliminate illicit or illegal non-stormwater discharges into stormwater conveyances.

“Stormwater runoff” means water flow on the surface of the ground or in storm sewers, resulting from precipitation.

“Stormwater management planning agency” means a public body authorized by legislation to prepare stormwater management plans.

“Stormwater management planning area” means the geographic area for which a stormwater management planning agency is authorized to prepare stormwater management plans, or a specific portion of that area identified in a stormwater management plan prepared by that agency.

“Tidal Flood Hazard Area” means a flood hazard area in which the flood elevation resulting from the two-, 10-, or 100-year storm, as applicable, is governed by tidal flooding from the Atlantic Ocean. Flooding in a tidal flood hazard area may be contributed to, or influenced by, stormwater runoff from inland areas, but the depth of flooding generated by the tidal rise and fall of the Atlantic Ocean is greater than flooding from any fluvial sources. In some situations, depending upon the extent of the storm surge from a particular storm event, a flood hazard area may be tidal in the 100-year storm, but fluvial in more frequent storm events.

“Urban Coordinating Council Empowerment Neighborhood” means a neighborhood given priority access to State resources through the New Jersey Redevelopment Authority.

“Urban Enterprise Zones” means a zone designated by the New Jersey Enterprise Zone Authority pursuant to the New Jersey Urban Enterprise Zones Act, N.J.S.A. 52:27H-60 et. seq.

“Urban Redevelopment Area” is defined as previously developed portions of areas:

1. Delineated on the State Plan Policy Map (SPPM) as the Metropolitan Planning Area (PA1), Designated Centers, Cores or Nodes;
2. Designated as CAFRA Centers, Cores or Nodes;
3. Designated as Urban Enterprise Zones; and
4. Designated as Urban Coordinating Council Empowerment Neighborhoods.

“Water control structure” means a structure within, or adjacent to, a water, which intentionally or coincidentally alters the hydraulic capacity, the flood elevation resulting from the two-, 10-, or 100-year storm, flood hazard area limit, and/or floodway limit of the water. Examples of a water control structure may include a bridge, culvert, dam, embankment, ford (if above grade), retaining wall, and weir.

“Waters of the State” means the ocean and its estuaries, all springs, streams, wetlands, and bodies of surface or groundwater, whether natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction.

“Wetlands” or “wetland” means an area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

## Section IV. Stormwater Management Requirements for Major Development

### P. Groundwater Recharge Standards

1. This subsection contains the minimum design and performance standards for groundwater recharge as follows:
2. The design engineer shall, using the assumptions and factors for stormwater runoff and groundwater recharge calculations at Section V, either:
  - i. Demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures maintain 100 percent of the average annual pre-construction groundwater recharge volume for the site; or
  - ii. Demonstrate through hydrologic and hydraulic analysis that the increase of stormwater runoff volume from pre-construction to post-construction for the 2-year storm is infiltrated.

Additional standards set forth in iii. and iv. below may apply as required.

iii. Non-Exempt Projects located in a Current Deficit Area: Where the project is located in a Current Deficit Area as identified in Exhibit A, the project shall demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures provide for enhanced recharge standards set forth in (5.) below.

iv. Non-Exempt Projects located in a Municipally Important Ground Water Recharge Area OR Prime Ground Water Recharge Area (**choose one**): Where the project is located in a Municipally Important Ground Water Recharge Area OR Prime Ground Water Recharge Area (**choose one**) as identified in Exhibit B, the following standards shall apply:

- a. Where disturbance is permitted in accordance with this subsection, it shall be limited to no greater than 15% of the Municipally Important Ground Water Recharge Area OR Prime Ground Water Recharge Area (choose one) on the site and shall preferentially be sited on that portion of Municipally Important Ground Water Recharge Area OR Prime Ground Water Recharge Area (choose one) that has the lowest groundwater recharge rates.
  - b. Where disturbance to the Municipally Important Ground Water Recharge Area OR Prime Ground Water Recharge Area (choose one) is permitted, the project shall demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures provide for enhanced recharge standards set forth in (5.) below.
3. This groundwater recharge requirement does not apply to projects within the “urban redevelopment area,” or to projects subject to 4 below.
4. The following types of stormwater shall not be recharged:
  - i. Stormwater from areas of high pollutant loading. High pollutant loading areas are areas in industrial and commercial developments where solvents and/or petroleum products are loaded/unloaded, stored, or applied, areas where pesticides are loaded/unloaded or stored; areas where hazardous materials are expected to be present in greater than “reportable quantities” as defined by the United States Environmental Protection Agency (EPA) at 40 CFR 302.4; areas where recharge would be inconsistent with Department approved remedial action work plan or landfill closure plan and areas with high risks for spills of toxic materials, such as gas stations and vehicle maintenance facilities; and
  - ii. Industrial stormwater exposed to “source material.” “Source material” means any material(s) or machinery, located at an industrial facility, that is directly or indirectly related to process, manufacturing or other industrial activities, which could be a source of pollutants in any industrial stormwater discharge to groundwater. Source materials include, but are not limited to, raw materials; intermediate products; final products; waste materials; by-products; industrial machinery and fuels, and lubricants, solvents, and detergents that are related to process, manufacturing, or other industrial activities that are exposed to stormwater.
  - iii. Carbonate Rock Areas. Where surficial or subsurface karst features have been identified and recharge facilities cannot be designed in a manner that would eliminate the concentrated subsurface release of stormwater. (Note: the mere presence of carbonate bedrock does not constitute a karst feature)

5. Enhanced Recharge Standards: Non-Exempt Projects that are subject to the enhanced recharge requirements by P.2.iii. or P.2.iv above, shall apply the following standards, either:

- i. Recharge 125 percent of the percentage of the average annual pre-construction groundwater recharge volume for the site; or
- ii. In addition to complying with the recharge requirements of section IV.P, retain on-site with no discharge, the Stormwater Quality Design Volume (SWQDv), defined as the runoff from the 1.25-inch, 2-hour rainfall event. Where meeting the recharge requirement will not result in retention of the full SWQDv, the major development shall retain any additional volume to meet the requirements of this section through additional infiltration, or through evapotranspiration or capture and on-site re-use of rainfall.

6. Mitigation Required for Non-Exempt Projects: In lieu of on-site recharge, the applicant shall be responsible for providing mitigation of the groundwater recharge volume in the required amount. The applicant should provide mitigation within the following areas, in order of priority:

- i. the same development site where feasible;
- ii. the same HUC14 subwatershed, or
- iii. an interrelated HUC14 subwatershed where no feasible option exists in the same HUC14 subwatershed.

If none of the above options are feasible or achievable, then the applicant shall comply with the mitigation requirements set forth in 7.

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7. Mitigation Required for Non-Exempt Projects: A waiver from strict compliance with the requirements of the Municipal Stormwater ordinance shall be approved by the municipality only in those cases where an applicant has demonstrated the inability to strictly comply with any standard of the municipal stormwater ordinance. A waiver from strict compliance for such projects can only be obtained if the applicant agrees to undertake a suitable mitigation measure identified in the mitigation section of the municipality's Stormwater Management Plan. In such cases, the applicant must submit a mitigation plan detailing how the project's failure to strictly comply will be compensated. In cases where a waiver is granted, an applicant should provide mitigation, if possible and/or practical, within the same drainage area within which the subject project is proposed, or contribute funding toward a municipal stormwater control project, or provide for equivalent treatment at an alternate location, or provide for another equivalent water quality benefit, in lieu of implementing the required stormwater control measures on their specific site.

## **PART II. STORMWATER ORDINANCE AMENDMENTS (Preservation Area Only):**

*(Please note: Where a municipality that contains both Planning and Preservation Area lands, but is only conforming to the Preservation Area, that municipality may restrict these standards to projects only in the Preservation Area by using this section.)*

### **Section II. Definitions:**

For the purpose of this ordinance, the following terms, phrases, words and their derivations shall have the meanings stated herein unless their use in the text of this Chapter clearly demonstrates a different meaning. When not inconsistent with the context, words used in the present tense include the future, words used in the plural number include the singular number, and words used in the singular number include the plural number. The word "shall" is always mandatory and not merely directory. The definitions below are the same as or based on the corresponding definitions in the Stormwater Management Rules at N.J.A.C. 7:8-1.2.

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“Drainage area” means a geographic area within which stormwater, sediments, or dissolved materials drain to a particular receiving waterbody or to a particular point along a receiving waterbody.



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3. Storing stormwater runoff for reuse.

“Highlands Open Waters” means all springs, wetlands, intermittent and ephemeral streams, perennial streams and bodies of surface water, whether natural or artificial, located wholly or partially within the boundaries of the Highlands Region, but shall not mean swimming pools.

“HUC 14” or “hydrologic unit code 14” means an area within which water drains to a particular receiving surface water body, also known as a subwatershed, which is identified by a 14-digit hydrologic unit boundary designation, delineated within New Jersey by the United States Geological Survey.

“Impervious surface – Highlands Preservation Area” means any structure, surface, or improvement that reduces or prevents absorption of stormwater into land, and includes porous paving, paver blocks, gravel, crushed stone, decks, patios, elevated structures, and other similar structures, surfaces, or improvements. To be considered an impervious surface, the structure, surface or improvement must have the effect of reducing or preventing stormwater absorption.

“Infiltration” is the process by which water seeps into the soil from precipitation.

“Karst” means a distinctive topography that indicates solution of underlying carbonate rocks (such as limestone and dolomite) by surface water or groundwater over time, often producing surface depressions, sinkholes, sinking streams, enlarged bedrock fractures, caves, and underground streams.

“Lead planning agency” means one or more public entities having stormwater management planning authority designated by the regional stormwater management planning committee pursuant to N.J.A.C. 7:8-3.2, that serves as the primary representative of the committee.

“Major development” means an individual “development,” as well as multiple developments that individually or collectively result in:

1. The disturbance of one or more acres of land since February 2, 2004;
2. The creation of one-quarter acre or more of “regulated impervious surface” since February 2, 2004;
3. The creation of one-quarter acre or more of “regulated motor vehicle surface” since March 2, 2021 {or the effective date of this ordinance, whichever is earlier}; or
4. A combination of 2 and 3 above that totals an area of one-quarter acre or more. The same surface shall not be counted twice when determining if the combination area equals one-quarter acre or more.

Major development includes all developments that are part of a common plan of development or sale (for example, phased residential development) that collectively or individually meet any one or more of paragraphs 1, 2, 3, or 4 above. Projects undertaken by any government agency that otherwise meet the definition of “major development” but which do not require approval under the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq., are also considered “major development.”

*NOTE: The definition of major development above aligns with the definition at N.J.A.C. 7:8-1.2 and is recommended for consistency. Alternatively, a municipality may adopt the following definition, which is the minimum standard required. Municipalities that have already adopted the definition at N.J.A.C. 7:8-1.2 or another definition that goes beyond the minimum requirement should not reduce the stringency of their definition by adopting the minimum standard.*

*“Major development” means an individual “development,” as well as multiple developments that individually or collectively result in the disturbance of one or more acres of land since February 2, 2004.*

*Major development includes all developments that are part of a common plan of development or sale (for example, phased residential development) that collectively or individually result in the disturbance of one or more acres of land since February 2, 2004. Projects undertaken by any government agency that otherwise meet the definition of “major development” but*

*which do not require approval under the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq., are also considered “major development.”*

*Additionally, individual municipalities may define major development with a smaller area of disturbance, a smaller area of regulated impervious or motor vehicle surface, or both.*

“Mitigation” means an action by an applicant providing compensation or offset actions for onsite stormwater management requirements where the applicant has demonstrated the inability or impracticality of strict compliance with the stormwater management requirements set forth in NJAC 7:8, in an adopted regional stormwater management plan, or in this local ordinance, and has received a waiver from strict compliance from the municipality. Mitigation shall include the implementation of the approved mitigation plan within the same drainage area where the subject project is proposed, or a contribution of funding toward a municipal stormwater control project, or provision for equivalent treatment at an alternate location, or any other equivalent water quality benefit as approved by the municipality.

“Motor vehicle” means land vehicles propelled other than by muscular power, such as automobiles, motorcycles, autocycles, and low speed vehicles. For the purposes of this definition, motor vehicle does not include farm equipment, snowmobiles, all-terrain vehicles, motorized wheelchairs, go-carts, gas buggies, golf carts, ski-slope grooming machines, or vehicles that run only on rails or tracks.

“Motor vehicle surface” means any pervious or impervious surface that is intended to be used by “motor vehicles” and/or aircraft, and is directly exposed to precipitation including, but not limited to, driveways, parking areas, parking garages, roads, racetracks, and runways.

“Municipality” means any city, borough, town, township, or village.

“Municipally Important Ground Water Recharge Area” means preserved or constrained lands that cannot be developed or built upon under current regulations. These areas have recharge rates above the median recharge rate for the subwatershed in which they are located; meaning they provide 40% or greater total recharge volume for the subwatershed. Constrained lands are comprised of undeveloped lands within the Highlands Open Water buffer as well as moderately and severely constrained steep slopes. Preserved lands are those that are permanently preserved by local, county, state, federal or non-profit entities. **OR Prime Ground Water Recharge Area**

“New Jersey Stormwater Best Management Practices (BMP) Manual” or “BMP Manual” means the manual maintained by the Department providing, in part, design specifications, removal rates, calculation methods, and soil testing procedures approved by the Department as being capable of contributing to the achievement of the stormwater management standards specified in this chapter. The BMP Manual is periodically amended by the Department as necessary to provide design specifications on additional best management practices and new information on already included

practices reflecting the best available current information regarding the particular practice and the Department's determination as to the ability of that best management practice to contribute to compliance with the standards contained in this chapter. Alternative stormwater management measures, removal rates, or calculation methods may be utilized, subject to any limitations specified in this chapter, provided the design engineer demonstrates to the municipality, in accordance with Section IV.F. of this ordinance and N.J.A.C. 7:8-5.2(g), that the proposed measure and its design will contribute to achievement of the design and performance standards established by this chapter.

"Node" means an area designated by the State Planning Commission concentrating facilities and activities which are not organized in a compact form.

"Non-Exempt Project" means any project not eligible for an exemption from the Highlands Water Protection and Planning Act Rules, pursuant to N.J.A.C. 7:38-2.3.

"Nutrient" means a chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the development of organisms.

"Person" means any individual, corporation, company, partnership, firm, association, political subdivision of this State and any state, interstate or Federal agency.

"Pollutant" means any dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, refuse, oil, grease, sewage sludge, munitions, chemical wastes, biological materials, medical wastes, radioactive substance (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. §§ 2011 *et seq.*)), thermal waste, wrecked or discarded equipment, rock, sand, cellar dirt, industrial, municipal, agricultural, and construction waste or runoff, or other residue discharged directly or indirectly to the land, ground waters or surface waters of the State, or to a domestic treatment works. "Pollutant" includes both hazardous and nonhazardous pollutants.

"Preservation Area" means lands within the Highlands Region that are located in that portion designated by the Highlands Act as the "Preservation Area" (see metes and bounds description at N.J.S.A. 13:20-7b).

"Prime Ground Water Recharge Area" means lands with the best ground water recharge rates within a HUC14 subwatershed, as indicated by GSR-32 analysis, that provide the top forty percent (40%) of the total recharge volume for the subwatershed. (OR Municipally Important Ground Water Recharge Area)

"Recharge" means the amount of water from precipitation that infiltrates into the ground and is not evapotranspired.

"Regional Master Plan" means the Highlands regional master plan or any revision thereof adopted by the Highlands Water Protection and Planning Council pursuant to N.J.S.A. C.13:20-8.

“Regulated impervious surface” means any of the following, alone or in combination:

1. A net increase of impervious surface;
2. The total area of impervious surface collected by a new stormwater conveyance system (for the purpose of this definition, a “new stormwater conveyance system” is a stormwater conveyance system that is constructed where one did not exist immediately prior to its construction or an existing system for which a new discharge location is created);
3. The total area of impervious surface proposed to be newly collected by an existing stormwater conveyance system; and/or
4. The total area of impervious surface collected by an existing stormwater conveyance system where the capacity of that conveyance system is increased.

“Regulated motor vehicle surface” means any of the following, alone or in combination:

1. The total area of motor vehicle surface that is currently receiving water;
2. A net increase in motor vehicle surface; and/or  
quality treatment either by vegetation or soil, by an existing stormwater management measure, or by treatment at a wastewater treatment plant, where the water quality treatment will be modified or removed.

“Sediment” means solid material, mineral or organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water or gravity as a product of erosion.

“Site” means the lot or lots upon which a major development is to occur or has occurred.

“Soil” means all unconsolidated mineral and organic material of any origin.

“State Development and Redevelopment Plan Metropolitan Planning Area (PA1)” means an area delineated on the State Plan Policy Map and adopted by the State Planning Commission that is intended to be the focus for much of the State’s future redevelopment and revitalization efforts.

“State Plan Policy Map” is defined as the geographic application of the State Development and Redevelopment Plan’s goals and statewide policies, and the official map of these goals and policies.

“Stormwater” means water resulting from precipitation (including rain and snow) that runs off the land’s surface, is transmitted to the subsurface, or is captured by separate storm sewers or other sewage or drainage facilities, or conveyed by snow removal equipment.

“Stormwater management BMP” means an excavation or embankment and related areas designed to retain stormwater runoff. A stormwater management BMP may either be normally dry (that is, a detention basin or infiltration system), retain water in a permanent pool (a retention basin), or be planted mainly with wetland vegetation (most constructed stormwater wetlands).

“Stormwater management measure” means any practice, technology, process, program, or other method intended to control or reduce stormwater runoff and associated pollutants, or to induce or control the infiltration or groundwater recharge of stormwater or to eliminate illicit or illegal non-stormwater discharges into stormwater conveyances.

“Stormwater runoff” means water flow on the surface of the ground or in storm sewers, resulting from precipitation.

“Stormwater management planning agency” means a public body authorized by legislation to prepare stormwater management plans.

“Stormwater management planning area” means the geographic area for which a stormwater management planning agency is authorized to prepare stormwater management plans, or a specific portion of that area identified in a stormwater management plan prepared by that agency.

“Tidal Flood Hazard Area” means a flood hazard area in which the flood elevation resulting from the two-, 10-, or 100-year storm, as applicable, is governed by tidal flooding from the Atlantic Ocean. Flooding in a tidal flood hazard area may be contributed to, or influenced by, stormwater runoff from inland areas, but the depth of flooding generated by the tidal rise and fall of the Atlantic Ocean is greater than flooding from any fluvial sources. In some situations, depending upon the extent of the storm surge from a particular storm event, a flood hazard area may be tidal in the 100-year storm, but fluvial in more frequent storm events.

“Urban Coordinating Council Empowerment Neighborhood” means a neighborhood given priority access to State resources through the New Jersey Redevelopment Authority.

“Urban Enterprise Zones” means a zone designated by the New Jersey Enterprise Zone Authority pursuant to the New Jersey Urban Enterprise Zones Act, N.J.S.A. 52:27H-60 et. seq.

“Urban Redevelopment Area” is defined as previously developed portions of areas:

1. Delineated on the State Plan Policy Map (SPPM) as the Metropolitan Planning Area (PA1), Designated Centers, Cores or Nodes;
2. Designated as CAFRA Centers, Cores or Nodes;
3. Designated as Urban Enterprise Zones; and
4. Designated as Urban Coordinating Council Empowerment Neighborhoods.

“Water control structure” means a structure within, or adjacent to, a water, which intentionally or coincidentally alters the hydraulic capacity, the flood elevation resulting from the two-, 10-, or 100-year storm, flood hazard area limit, and/or floodway limit of the water. Examples of a water control structure may include a bridge, culvert, dam, embankment, ford (if above grade), retaining wall, and weir.

“Waters of the State” means the ocean and its estuaries, all springs, streams, wetlands, and bodies of surface or groundwater, whether natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction.

“Wetlands” or “wetland” means an area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

## Section IV. Stormwater Management Requirements for Major Development

### P. Groundwater Recharge Standards

1. This subsection contains the minimum design and performance standards for groundwater recharge as follows:
2. The design engineer shall, using the assumptions and factors for stormwater runoff and groundwater recharge calculations at Section V, either:
  - i. Demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures maintain 100 percent of the average annual pre-construction groundwater recharge volume for the site; or
  - ii. Demonstrate through hydrologic and hydraulic analysis that the increase of stormwater runoff volume from pre-construction to post-construction for the 2-year storm is infiltrated.

Additional standards set forth in iii. and iv. below may apply as required.

iii. Non-Exempt Projects located in the Preservation Area and in a Current Deficit Area: Where the project is located in the Preservation Area and in a Current Deficit Area as identified in Exhibit A, the project shall demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures provide for enhanced recharge standards set forth in (5.) below.

iv. Non-Exempt Projects located in the Preservation Area and in a Municipally Important Ground Water Recharge Area OR Prime Ground Water Recharge Area (choose one): Where the project is located in the Preservation Area and in a Municipally Important Ground Water Recharge Area OR Prime Ground Water Recharge Area (choose one) as identified in Exhibit B, the following standards shall apply:

- a. Where disturbance is permitted in accordance with this subsection, it shall be limited to no greater than 15% of the Municipally Important Ground Water Recharge Area OR Prime Ground Water Recharge Area (*choose one*) on the site and shall preferentially be sited on that portion of Municipally Important Ground Water Recharge Area OR Prime Ground Water Recharge Area (*choose one*) that has the lowest groundwater recharge rates.
  - b. Where disturbance to the Municipally Important Ground Water Recharge Area OR Prime Ground Water Recharge Area (*choose one*) is permitted, the project shall demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures provide for enhanced recharge standards set forth in (5.) below.
3. This groundwater recharge requirement does not apply to projects within the “urban redevelopment area,” or to projects subject to 4 below.
4. The following types of stormwater shall not be recharged:
  - i. Stormwater from areas of high pollutant loading. High pollutant loading areas are areas in industrial and commercial developments where solvents and/or petroleum products are loaded/unloaded, stored, or applied, areas where pesticides are loaded/unloaded or stored; areas where hazardous materials are expected to be present in greater than “reportable quantities” as defined by the United States Environmental Protection Agency (EPA) at 40 CFR 302.4; areas where recharge would be inconsistent with Department approved remedial action work plan or landfill closure plan and areas with high risks for spills of toxic materials, such as gas stations and vehicle maintenance facilities; and
  - ii. Industrial stormwater exposed to “source material.” “Source material” means any material(s) or machinery, located at an industrial facility, that is directly or indirectly related to process, manufacturing or other industrial activities, which could be a source of pollutants in any industrial stormwater discharge to groundwater. Source materials include, but are not limited to, raw materials; intermediate products; final products; waste materials; by-products; industrial machinery and fuels, and lubricants, solvents, and detergents that are related to process, manufacturing, or other industrial activities that are exposed to stormwater.
  - iii. Carbonate Rock Areas in the Preservation Area. Where surficial or subsurface karst features have been identified and recharge facilities cannot be designed in a manner that would eliminate the concentrated subsurface release of stormwater. (Note: the mere presence of carbonate bedrock does not constitute a karst feature)



5. Enhanced Recharge Standards: Non-Exempt Projects that are subject to the enhanced recharge requirements by P.2.iii. or P.2.iv above, shall apply the following standards, either:

- i. Recharge 125 percent of the percentage of the average annual pre-construction groundwater recharge volume for the site; or
- ii. In addition to complying with the recharge requirements of section IV.P, retain on-site with no discharge, the Stormwater Quality Design Volume (SWQDv), defined as the runoff from the 1.25-inch, 2-hour rainfall event. Where meeting the recharge requirement will not result in retention of the full SWQDv, the major development shall retain any additional volume to meet the requirements of this section through additional infiltration, or through evapotranspiration or capture and on-site re-use of rainfall.

6. Mitigation Required for Non-Exempt Projects in the Preservation Area: In lieu of on-site recharge, the applicant shall be responsible for providing mitigation of the groundwater recharge volume in the required amount. The applicant should provide mitigation within the following areas, in order of priority:

- i. the same development site where feasible;
- ii. the same HUC14 subwatershed, or
- iii. an interrelated HUC14 subwatershed where no feasible option exists in the same HUC14 subwatershed.

If none of the above options are feasible or achievable, then the applicant shall comply with the mitigation requirements set forth in 7.

7. Mitigation Required for Non-Exempt Projects in the Preservation Area: A waiver from strict compliance with the requirements of the Municipal Stormwater ordinance shall be approved by the municipality only in those cases where an applicant has demonstrated the inability to strictly comply with any standard of the municipal stormwater ordinance. A waiver from strict compliance for such projects can only be obtained if the applicant agrees to undertake a suitable mitigation measure identified in the mitigation section of the municipality's Stormwater Management Plan. In such cases, the applicant must submit a mitigation plan detailing how the project's failure to strictly comply will be compensated. In cases where a waiver is granted, an applicant should provide mitigation, if possible and/or practical, within the same drainage area within which the subject project is proposed, or contribute funding toward a municipal stormwater control project, or provide for equivalent treatment at an alternate location, or provide for another equivalent water quality benefit, in lieu of implementing the required stormwater control measures on their specific site.